2014 BSEE Domestic and International Standards Workshop New Orleans, Louisiana 28-29 January 2014

Regulators' use of standards

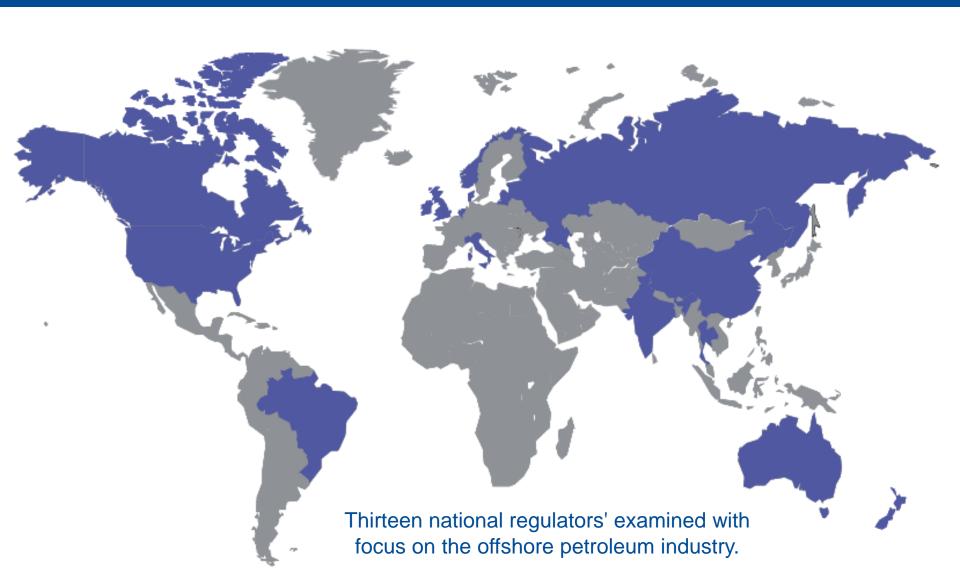
Alf Reidar Johansen Standards Manager

Regulators' use of standards

Report No. 426 March 2010

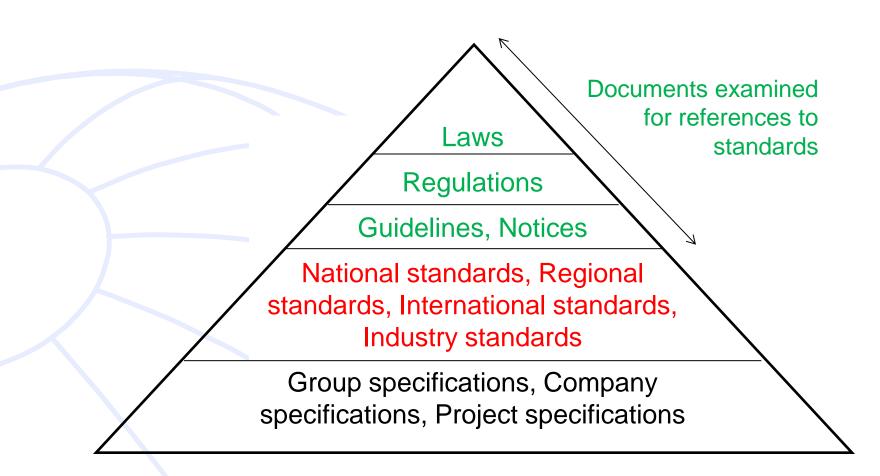
#### **Regulators examined**





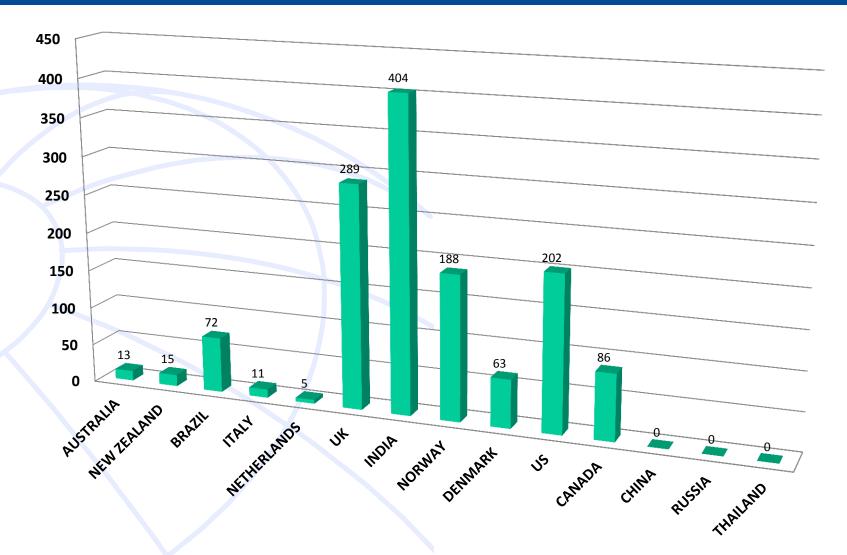
#### **Document hierarchy**



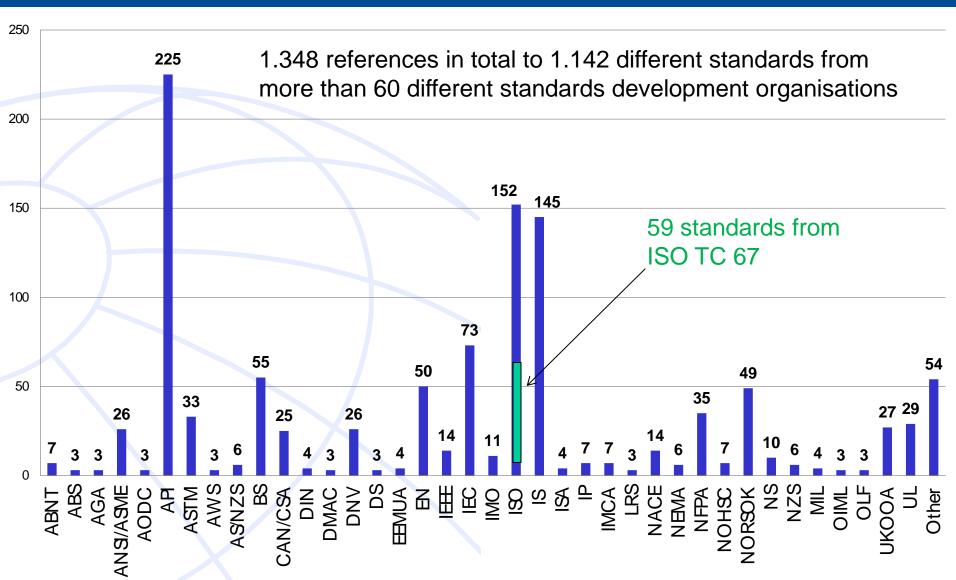


# Number of standards referenced by regulators





#### Standards referenced by regulators



#### **Definition challenges!**

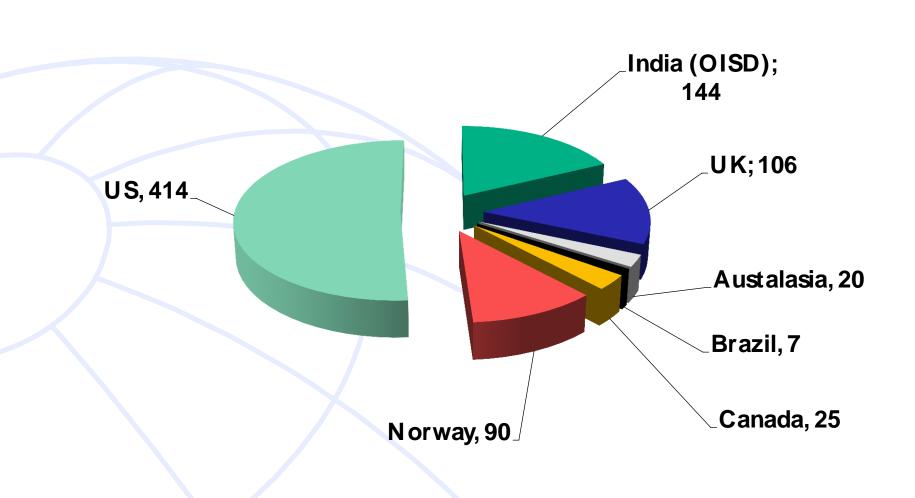


- API Shall = As used in a recommended practice, "shall" denotes a minimum requirement in order to conform to the RP.
- API Should = As used in a recommended practice, "should" denotes a recommendation or that which is advised but not required in order to conform to the RP.
- ISO Shall = used to indicate requirements strictly to be followed in order to conform to the document and from which no deviation is permitted.
- ISO Should = used to indicate that among several possibilities one is recommended as particularly suitable (abbreviated).
- ISO Must = Do not use "must" as an alternative for "shall".
- PSA Shall = conveys a requirement of law or regulations or the authorities' interpretation of requirements that allow for no other solutions.
- PSA Should = means the authorities' recommended manner of fulfilling the function requirement. Alternative solutions with documented equivalent functionality and quality can be employed.



BOEMRE: The terms should and shall mean must!

#### Origin of standards referenced



#### Standards most frequently used



- 5. API Spec 6A Wellhead and Christmas Tree Equipment (ISO 10423) IMO Mobile Offshore Drilling Units (MODU) Code
- 4. API RP 14B Design, Installation, Repair and Operation of Subsurface Safety Valve Systems (ISO 10417)

**API Spec 17J Unbonded Flexible Pipe (ISO 13628-10)** 

**IEC 60331-11 Fire resisting characteristics of electric cables** 

API RP 14C Analysis, Design, Installation, and Testing of Basic Surface Safety Systems for Offshore Production Platforms (ISO 10418)

**API RP 521 Guide for Pressure-Relieving and Depressuring Systems (ISO 23251)** 

**API Spec 14A Subsurface safety valves (ISO 10432)** 

NFPA 13 Installation of sprinkler systems

**ANSI/ASME VIII-1 Pressure Vessels** 

NACE MR 01-75 Standard Material Requirements, Metals for Sulphide Stress Cracking and Stress Corrosion Cracking Resistance in Sour Oilfield Environments (ISO 15156)

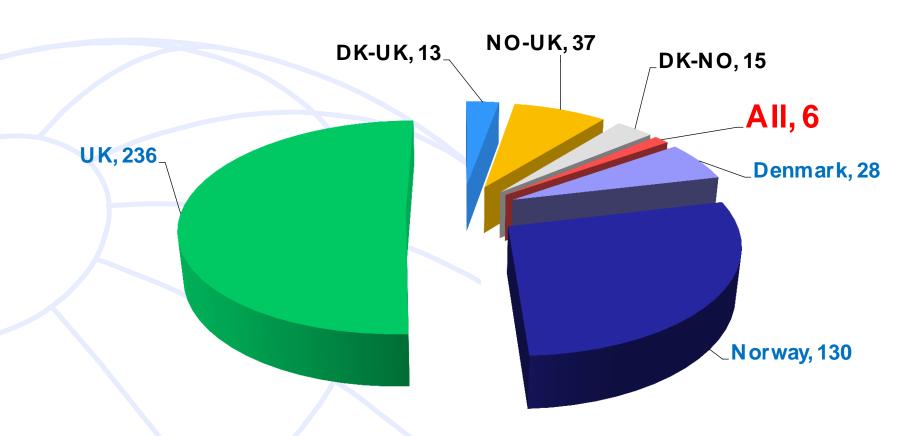
### **Duplicating standards – Pipeline transportation systems**



- ANSI/ASME B31.4 Liquid Transportation Systems for Hydrocarbons
- ANSI/ASME B31.8 Gas Transmission and Distribution Piping Systems
- API RP 1102 Liquid Petr. Pipelines Crossing Railroads and Highways
- API RP 1111 Offshore Hydrocarbon Pipelines
- CAN/CSA-Z184-92, Gas Pipeline Systems;
- CAN/CSA-Z187-M87 Offshore Pipelines (replaced by Z662-07)
- DNV OS-F101 Submarine Pipeline Systems
- EN 14161 Pipeline Transportation Systems (EN adoption of ISO 13623)
- ISO 13623 PNGI Pipeline transportation systems
- NEN 3650 Requirements for pipeline systems
- NZS 5223 Code of Practice for HP Gas and Petroleum Liquids Pipelines
- PD 8010-2 Code of practice for pipelines: Subsea pipelines

#### Danish-Norwegian-UK references Few common references

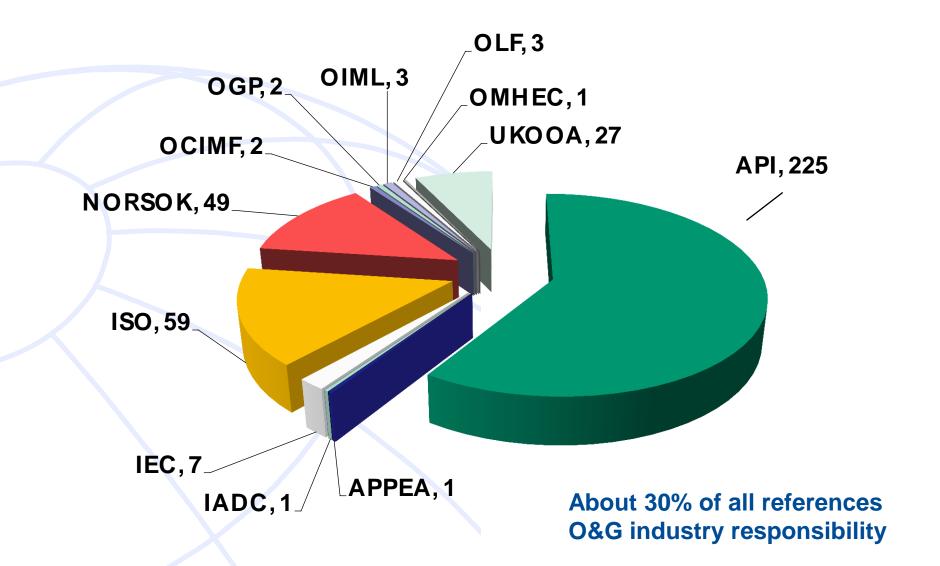




DK+NO+UK reference 465 standard titles in total

## Standards referenced within the Oil & Gas industry responsibility





#### **Main findings**



- 1.348 references in total.
- From more than 60 organisations.
- 1.142 of these are to different titles.
- Only 13% referenced by two or more regulators.
- Industry 44%, national 35% and international standards referenced 21%.
- Most regulators use undated references to standards.
- Referenced standards appear to be voluntary in most of the regulatory regimes, i.e. alternative references may be used.

#### **Survey conclusion**



- Regulators make good use of standards!
- Little harmonization by regulators in their use of standards.
- Diversity of references provides additional work for global operators.
- A majority of reference standards are from US.
- Duplication of standards.
- References to international standards have increased compared to earlier analysis.

#### **Proposals**



- Encourage regulators to participate actively in international standards work.
- Regulators to make proposals for revisions or new standards when deemed necessary.
- Encourage regulators to make references to more globally relevant standards.
- Make IRF list of jointly preferred reference standards.
- Undated references will allow quicker adoption of latest technology.
- Agree "shall" and "should" definitions.
- IRF should liaise with ISO/TC67.

### IRF Strategic agenda Vancouver 2010



Following the conference, IRF members met and approved a strategic agenda focusing on the following topics:

- Safety culture and leadership
- BOP integrity and operational issues
- Performance indicators
- Operator competency/capacity criteria
- Use of standards and industry best practice.

#### Joint IRF/ISO/OGP presentation



#### **Standards & Best Practices**

### **IRF Summit Conference, Stavanger, 4-5 October 2011**

- Jan de Jong, SODM
- Steve Walker, UK HSE
- Alf Reidar Johansen, OGP
- Neil Reeve, ISO/TC67







#### **Concluding presentation proposals**

- 1. Support the ISO (and IEC) standards system
- 2. Create a standing IRF "standards" sub-group
  - set clear priorities, monitor progress
  - engage with standards committees
  - influence standards management to meet IRF needs
- 3. Develop questionnaire for IRF members (standards usage)
- 4. Consider response to OGP Report "Regulators' use of standards"; and consider making "list"
- 5. Distinguish roles on "Good practice" and "Best practice"

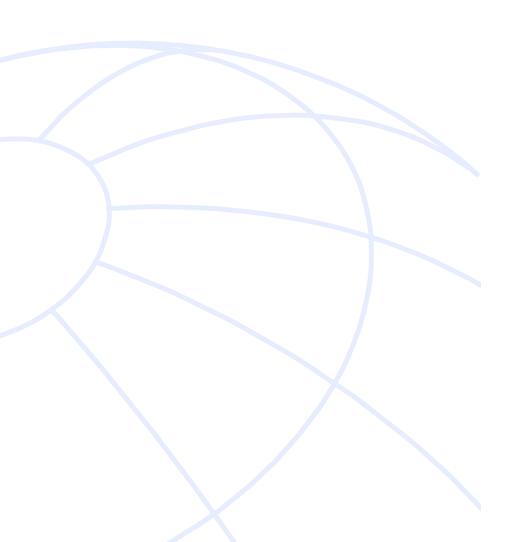
### IRF Members' Resolutions Stavanger 2011



- IRF committed to supporting the ISO standards system (and IEC for electrical issues) as the principal system for offshore regulators to support in order to achieve globally agreed offshore standards.
- However, IRF recognised the crucial role that relevant national and regional standards would continue to play whilst no equivalent ISO standards existed.







#### **Questions?**

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#### References



- Regulators' use of standards. OGP Report No. 426, March 2010. <a href="http://www.ogp.org.uk/pubs/426.pdf">http://www.ogp.org.uk/pubs/426.pdf</a>
- OGP Position paper on the development and use of international standards. OGP Report No. 381. May 2007. <a href="http://www.ogp.org.uk/pubs/381.pdf">http://www.ogp.org.uk/pubs/381.pdf</a>
- ISO publication: Using and referencing ISO and IEC standards for technical regulations <a href="http://www.standardsinfo.net/info/livelink/fetch/2000/148478/6301438/docs/ISOandIEC standards for technical regulations en.pdf">http://www.standardsinfo.net/info/livelink/fetch/2000/148478/6301438/docs/ISOandIEC standards for technical regulations en.pdf</a>
- ISO/IEC Inventory of studies on the economic and social benefits of standardization: <a href="http://www.standardsinfo.net/info/livelink/fetch/2000/148478/6301438/benefits/benefits s1.html">http://www.standardsinfo.net/info/livelink/fetch/2000/148478/benefits/benefits s1.html</a>